- D -

dark field illumination

Any method of illumination which illuminates the specimen but does not admit light directly to the objective. It may be by substage (dark field, q.v.) condensers; by stagespot lighting, by special condensers fitted around special objectives for reflected illumination or by the slit ultramicroscope.

dark field imaging

Using a single diffracted beam to form the image in a TEM. This causes all regions of the specimen not of the same crystal structure and orientation as the region which produced the diffracted beam to be represented as very dark in the final image; allowing phase differentiation visually in the TEM.

dark field objective

Certain objectives for high-power, dark fieldwork equipped with iris diaphragms or funnel stops so that their apertures may be reduced to correspond to the dark field con-denser with which they are used.

dark field slides

Owing to the exacting demands of dark field illumination, not only must the microscope slide be especially clean, but also the glass of which the slide is composed must be optically clear under dark field conditions. The glass should not fluoresce. For general use and for special work, see ASTM specifications.

dark field stop

A central stop for obtaining a dark field effect for low-power objectives. It is customarily used with a high NA, bright field condenser.

Davis shutter

A fitting with a small iris diaphragm, attached above a low-power objective for reducing the aperture. In this way depth of field can be increased for the photomicrography of objects illuminated by incident light.

definition

The distinctness with which the very fine detail in an image or photograph can be seen.

definition

The degree of detail or sharpness in a video picture.